## **IN THE CLAIMS**:

Please amend the claims as follows.

Claims 1-6 (Canceled).

Claim 7 (Currently Amended): A quantum cascade laser having a unipolar laser device structure, comprising:

a semiconductor substrate formed of GaAs; and

an active layer, disposed on said semiconductor substrate and having a plurality of quantum well light emitting layers, each having a quantum well structure including a quantum well layer and quantum barrier layer and generating light by means of intersubband transitions in the quantum well structure, and a plurality of injection layers, respectively disposed between the plurality of quantum well light emitting layers and forming a cascade structure along with said quantum well light emitting layers; and

wherein said quantum well light emitting layers and said injection layers of said active layer are formed to contain group III-V compound semiconductors, each containing, as the group V elements, N and at least one element selected from the group consisting of As, P, and Sb; and

wherein, in said active layer, electrons move successively in a cascading manner among said quantum well light emitting layers, and light is generated in the process of the intersubband transition at each light emitting layer; and

wherein the active layer is disposed directly on the substrate.

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Claim 8 (Original): The quantum cascade laser according to Claim 7, wherein the

composition ratio of N in said group III-V compound semiconductor is no less than 0.1%

and no more than 40%.

Claim 9 (Currently Amended): The quantum cascade laser according to Claim 7,

further comprising a semiconductor layer formed adjacent said active layer, disposed at

least either between said semiconductor substrate and said active layer or at the side of

said active layer opposite the semiconductor substrate side and formed of a group III-V

compound semiconductor[[,]] containing, as the group V elements, N and at least one

element selected from the group consisting of As, P, and Sb.

Claim 10 (Canceled).